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The Bell Telephone System

By EDWIN M. BUSH
(New York Office)

The history of civilization is the history of intercommunication, the advance agent of intellectual, commercial, and social development. In this development the steamship, the railway, the electric telegraph, the gasoline engine, and many other agencies have played notable parts. The tremendous progress of the last few decades, however, is undoubtedly due in largest measure to the discovery, growth, and improvement of a comparatively new science, that of telephony. Its influence on the life of our time is inestimable.

The rapid development of this science and the equally rapid development of the service have been accomplished in less than half a century by the Bell Telephone System. This system, as now constituted, is composed of the American Telephone and Telegraph Company and its Associated Companies. It is as remarkable for its feats of organization and finance as for its scientific achievements. As the result of its work, we accept the telephone today as an established and commonplace institution.

In social intercourse, it is a helpful factor, in modern business it is indispensable. Yet how few of us consider the immensity of the service which it actually offers. Seldom do we reflect that by lifting a telephone receiver we place ourselves within possible speaking and hearing distance of 14,000,000 other telephone stations, distributed over the entire length and breadth of our country, nor do we think of the vast equipment necessary for their operation.

In the light of the present status of the Bell System, it is hard to believe that its immense plant has grown from a single idea which germinated in the mind of a struggling inventor only forty-seven years ago, that the present telephone companies, whose securities are

now considered high grade investments, are the outgrowth of an organization beset for years after its inception with almost insuperable financial and legal difficulties.

A New Voice Is Heard

The inventor of the telephone, Dr. Alexander Graham Bell, was a young



Theodore N. Vail
He Made Neighbors of a Hundred Million People

professor of acoustics in Boston, a specialist in defective speech and deafness, and a student of electricity. Associated with him in his earliest telephone work were Charles Williams, owner of an electrical workshop in Boston in which some of his experiments were conducted, Thomas Sanders, father of one of his pupils, and Thomas A. Watson, one of Williams' employees.

Dr. Bell's experiments were begun with the idea of perfecting a "harmonic telegraph," an instrument which would transmit, in the form of musical sounds, several messages over one wire. On June 2, 1875, Bell and Watson first succeeded in conveying a musical note over a wire. Then, after nine months more of feverish activity, they succeeded, on March 10, 1876, in transmitting the first intelligible words. They were spoken by Dr. Bell, "Mr. Watson, please come here, I want you."

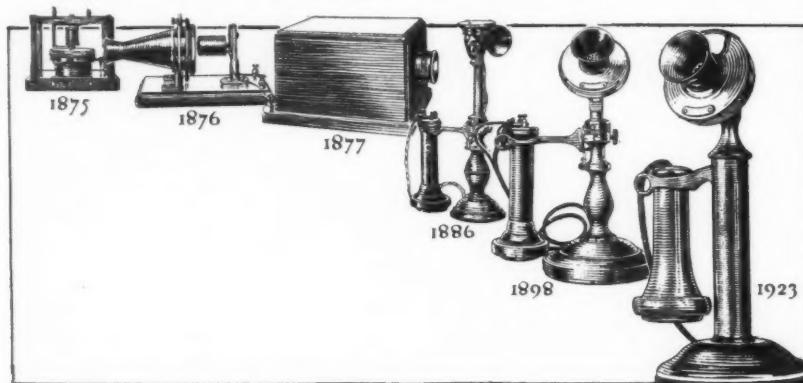
Bell's patent, "the most valuable single patent ever issued in any country," bore the date of March 7, 1876. Three months later, Gardiner G. Hubbard, lawyer, member of Congress, and father of Bell's fiancee, arranged for him to set up his new invention in the Department of Education exhibit at the Centennial

Exposition in Philadelphia. Little attention was paid it, however, until His Majesty, Dom Pedro of Brazil, who had once visited Bell's class of mutes at Boston University, and Lord Kelvin, engineer of the first Atlantic cable, both evinced interest in the telephone. Upon testing it, they were startled and pleased to find that it really worked. Their interest gained for it much publicity, and it became the feature of the exposition.

Early Telephone Finances

No one seemed to realize, however, that this invention was an entirely new thing, that potentially it was bringing within hearing distance every human being in the world. Making it a commercial investment proved very difficult.

The first association formed for that purpose, called the Bell Telephone Co., consisted of Hubbard, President; Sanders, Treasurer; Bell, Electrician; Watson, Superintendent. Sanders' personal capital was practically its only resource. This association began to manufacture telephones and lease them on a yearly rental basis. Some of these instruments were hooked up to the electrical wires of the Holmes Burglar Alarm Co., in



"The Evolution of the Telephone"

Boston. The Bell Company's first line was established between Somerville and Boston in April, 1877. Although 800 telephones were in use and a list of subscribers was growing, the flow of income was entirely too slow to provide for the manufacture of the costly instruments. Within sixteen months after the date of the Bell patent, Sanders' capital of \$35,000.00 was nearly exhausted.

Besides financial troubles, legal difficulties arose. The telegraph company to which Mr. Bell had earlier offered to sell his patents, now organized the American Speaking Telephone Co., which disregarded the Bell patents, evidently expecting to crush the young company. On the contrary, its opposition served as good advertising. The demand for telephones became greater than the Bell company could satisfy. But its officers were hampered by lack of funds and were seemingly unable to obtain working capital.

The Telephone Company Acquires a Manager

At this critical period, Theodore N. Vail,* one of the most picturesque figures in the history of American finance, entered the telephone field. Mr. Vail, who had once been a telegraph operator, was Superintendent of the Railway Mail

Service, where he had proved himself the greatest organizer in the country. His knowledge of the telephone had been gained from Hubbard, who had persuaded him to cast his lot with the Bell forces as General Manager. "With bankruptcy an ever present menace, a lawsuit with a corporation of limitless capital impending, with nothing to go on but backbone, a genius for constructive organization, a

serene faith in the future and in himself, Theodore N. Vail undertook his giant task." More specifically, this task was to bring order out of the Bell affairs, to establish a sound organization, and to promote telephone extension into the vast territories outside of New England.

The first subsidiary, the New England Telephone Company, had already been formed. At the end of May, 1878, there were in operation outside of



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Harry B. Thayer, President of The American Telephone and Telegraph Company

New England only 6,335 telephones. Mr. Vail immediately organized the Bell Telephone Co. of New York, and assigned other territories to various agents. The agreement of the New York company with the parent company is illustrative of his general scheme for telephone extension. Subsidiary companies were to be formed in different districts by local stock subscription, a percentage of the stock to go to the parent company for the franchise, and a yearly rental to be paid the parent company for the use of instruments.

*The biography of Mr. Vail is interestingly set forth in Albert Bigelow Paine's book, "In One Man's Life", from which much of the material in this article was obtained.

Reorganization and Litigation

One point in Mr. Vail's program was the reorganization of the Bell company, the result being the first real Bell Telephone Co., since its predecessor had been merely an association. This reorganization completed, there followed a hard and discouraging period of establishing agencies and fighting the Western Union.

The Western Electric Co., which had been employed to manufacture instruments for the Western Union, now offered to pay royalties on Bell instruments, thereby tendering its recognition of the validity of the Bell patents. The Western Union gained a heavy advantage, however, by use of a much improved transmitter, which had been developed by Edison. The Bell company in turn soon secured the Blake transmitter, as good as the Edison, and was thereby enabled to continue the fight on equal terms. After a year's struggle, the case was settled out of court, the Western Union agreeing to stay out of the telephone business, but being allowed to use Bell phones on its own private wires. The Bell company bought the Western Union telephone system, consisting of 56,000 phones and the equipment necessary for their operation in 55 cities.

Extension and Improvement

By February, 1879, the Bell Telephone Co. had become the National Bell Telephone Co., a combination of the Bell and the New England companies. In the following period there was great extension of agencies and increase in production. The parent company then adopted the policy of securing controlling interests in subsidiaries. In March, 1880, the National Bell Telephone Co. became the American Bell Telephone Co. The prosperity of the company at this

time began to attract the attention of innumerable cranks and so-called inventors, who attacked the Bell patents. During the 17 years of their existence, the validity of these patents was tested in more than 600 lawsuits, all of which were won by the Bell company.

The mechanical progress of the telephone industry kept step with its financial progress. Constant improvement was made in transmitters and signalling devices, the all-metallic circuit was adopted, the multiple switch board designed. Control of the Western Electric Co. and other electrical manufacturers was acquired in order to facilitate the production of telephone equipment.

Long Lines and Underground

The use of hard drawn copper wire made possible the first successful long distance line, which was opened between Boston and New York in the spring of 1884. Another line was stretched from New York to Philadelphia.

Interest was developed in long distance telephoning to such degree that the American Telephone and Telegraph Co. was formed with Mr. Vail as President, for the purpose of promoting long distance extension. The charter of this company laid out an ambitious program and the lines were pushed westward at the rate of thousands of miles per year.

Meanwhile the overhead wires had increased so greatly in the large cities that they became both unsightly and dangerous. After many unsuccessful attempts, methods were found to make practicable putting them underground, and subsidiary companies were formed for that purpose. This work progressed so rapidly that by the end of 1889 there were 11,000 miles of underground wire in New York City alone.

Mr. Vail Resigns

On account of failing health, Mr. Vail had resigned as General Manager of the American Bell Telephone Co. in 1885, at which time he had taken up the duties of President of the American Telephone and Telegraph Co. In 1887, he was forced to relinquish this position also, and a little later to give up all his other active interests in the telephone business. Mr. Vail's successor was John E. Hudson. For several years under his leadership, telephone affairs were administered in a rather conservative manner. Aside from long distance extension, the growth of the system became gradual. In the later years of his administration, however, more liberal policies were adopted and the usefulness of the Bell System was extended rapidly. By 1900, there were more than 1,200 exchanges and 1,500,000 miles of wire.

Since its formation for the extension of long distance lines, the American Telephone and Telegraph Co. had grown steadily until in 1900 it absorbed the American Bell Telephone Co. and became the parent company. Shortly after this event, Mr. Hudson died, and his place was offered to Mr. Vail, then in South America. Mr. Vail being unable to accept, Frederick P. Fish, an eminent patent lawyer and director of the corporation, reluctantly took the position. He inaugurated an era of building and financing, and adopted a conciliatory attitude toward the independents, either buying, consolidating with, or connecting with them. The telephone company did not escape the influence of the general business inflation of that period. Exchanges multiplied by the thousand, telephones by the million, bonded debt in proportion.

Mr. Vail Returns to Power

In May, 1907, Mr. Vail, who had disposed of his South American interests and returned to this country, was elected President of the American Telephone and Telegraph Co. In the face of an impending panic he announced a stock issue of 220,000 shares which was absorbed immediately. This stroke not only netted necessary additional capital but stimulated a demand for telephone bonds. As a result, the telephone companies easily weathered the panic of 1907.

Among Mr. Vail's next achievements was the reorganization of a scattered engineering force into a unified staff with John J. Carty as Chief Engineer. He also saw that a uniform system of accounts and reports was necessary, and accordingly a simple system was devised which readily supplies financial statements and the information called for by the Interstate Commerce Commission.

Mr. Vail's motto was "One Policy, One System, Universal Service." His policy was to take the public into his confidence. The opportunity of consolidation was extended to independent companies. The attitude of the company toward both employees and the public became personal and friendly. When Mr. Vail returned as head of the telephone system there were 8,500,000 miles of telephone wire—more than half underground—connecting over 3,000,000 subscribers. From that time to this the system has grown tremendously.

Telephone and Telegraph Service Combined

Affiliation of the Western Union Telegraph Co. with the American Telephone and Telegraph Co. was consummated in 1909. Mr. Vail believed that telephone and telegraph service could be combined to the advantage of both

companies, so a controlling interest was acquired by the telephone company in the Western Union, and he was made its president. The result was general improvement in telegraph service. For the convenience of the public, night and day letters, cable letters, week end cables, etc., were devised. Interest in the employees led to the establishment there, as in the telephone system, of pension, loan and sick benefit funds. In 1913, the two companies separated. The telephone company disposed of its holdings in Western Union, and Mr. Vail resigned as its President.

Talking Across the Continent

The end of 1914 brought completion of the first transcontinental line. The ceremonies attendant upon the memorable formal opening of this line were participated in by Mr. Vail at Jekyl Island, Georgia, and President Wilson at Washington. In their hearing, Alexander Graham Bell at New York spoke to Thomas A. Watson at San Francisco, repeating the first words ever transmitted over wire, "Mr. Watson, please come here, I want you." Watson's reply was, "It would take me a week to do that now."

Meanwhile, anticipating the efforts of inventors who loudly predicted that the wires would soon be rendered superfluous, telephone engineers had directed their efforts toward wireless telephony. By September, 1915, they had made it possible to speak from New York to California by wireless. A little later, radio messages from New York were heard simultaneously in Paris, Mare Island, San Diego, Panama and Honolulu.

Foreseeing the entrance of the United States into the World War, and a probable scarcity of money afterward, Mr. Vail proposed raising \$130,000,000

by stock and bond issues in the autumn of 1916. These went with a rush and provided very satisfactorily for war emergencies.

The Telephone "Goes to War"

The history of the telephone in the World War is a fit subject for a large volume. A comparatively little known contribution of the Bell System to American efforts in the World War dates back to 1915 when W. S. Gifford, then statistician and now executive vice-president of the American Telephone and Telegraph Co., as Supervising Director of the Committee on Industrial Preparedness of the Naval Consulting Board, directed the efforts of 30,000 engineers in making a sweeping inventory of American industry, covering 27,000 industrial establishments. This became the foundation of our great war effort. Later, he served as Director of the Council of National Defense.

The entrance of this country into the struggle found the Bell System ready for action. Service was installed for the big training camps and for official Washington almost overnight. Battalions formed for service in France built great telephone systems there, laboring under the most unfavorable conditions. Fourteen battalions, consisting of more than twenty-five thousand men, enlisted for service. More than half of them served overseas.

The Government took over operation of all telephone lines in August, 1918, all means of communication at that time being put under one head. The heartiest co-operation was accorded the Government during the period of its operation of telephone facilities by President Vail and his entire personnel. After one year of Government operation, the wires were returned to private control.

Mr. Vail retired as President of the American Telephone and Telegraph Co., in June, 1919, but remained with the company as Chairman of its Board of Directors. His successor as President was Harry B. Thayer, who for eleven years had been President of the Western Electric Co. Theodore N. Vail, the greatest figure in telephone history, died on April 16, 1920, full of years and rich in achievements.

Steps in the Conquest of Time and Space

The continued advance in the telephonic art was marked in 1921 by a deep sea cable conversation over a distance of 115 miles from Key West, Florida, to Havana, Cuba. Communication was opened between Havana and Catalina Island, 5,500 miles apart, by means of submarine cable, overhead and underground wires, and radio telephone. President Harding's inaugural address was delivered by loud speakers to more than 100,000 people. The Armistice Day exercises at the burial of an unknown soldier were delivered by means of Bell loud speakers and long lines to more than 150,000 people in Arlington, New York, and San Francisco.

In 1922, a ship to shore conversation was carried on by wire and wireless between Bell telephones in homes and offices and the S.S. America, 400 miles at sea. Early in 1923 there was accomplished a successful demonstration of trans-oceanic radio telephony from a Bell Telephone station in New York City to a group of scientists and journalists in New Southgate, England.

Layout of the Bell System

The Bell System and its connecting companies provide a nation-wide network of telephone toll lines and local exchange lines, together with switchboards, buildings, and other telephone

property, linking together in one comprehensive system of communication more than 14,000,000 telephone stations serving cities, towns, and rural districts throughout the United States. This network of wires, the nervous system of the nation, is a fitting monument to the idea of Doctor Bell, who made the telephone, to the genius, wisdom, and foresight of Mr. Vail, who made the telephone business, and to the work of thousands upon thousands of telephone employees who have labored devotedly toward the ideal of Universal Service.

Functions and Holding of the Parent Company

The American Telephone and Telegraph Co., the parent company, at January 1, 1923, owned directly or indirectly all of the voting stock of fourteen Associated Companies, 78 per cent of nine others, 31.5 per cent of two others, and nearly all the voting stock of the Western Electric Co., which is the manufacturing and supply organization of the Bell System. It owns all the stock of the Bell Telephone Securities Co., which has been organized to aid intending investors by disseminating information about Bell System securities. Through its Long Lines Department it owns and operates the long distance telephone lines which join together the local telephone systems of the Associated Companies. It also owns the telephone instruments used by these companies, and it owns, controls, or is licensed under more than six thousand United States letters patent and applications, covering every phase of the business, and fully assuring its unrestricted field for development.

The Associated Companies own and operate the local telephone exchanges and toll lines. They connect with over 9,000 independent telephone companies and

more than 26,000 rural lines and associations.

Through its Engineering, Development and Research, Legal, Accounting, Commercial and Financial departments, the parent company forms a sort of clearing house, through which all the companies may enjoy the benefit of the solution of the problems of any one of them. Through it all telephone methods and equipment are standardized and wasteful duplication is avoided.

Another of the functions of the parent company is to finance its Associated Companies. Faced by an ever increasing demand for telephones, these operating companies are constantly in need of additional capital to provide for expansion. This the parent company provides by investing the proceeds from the sale of its own securities in stocks and obligations of the Associated Companies. Such investments stood upon the published balance sheet of the American Telephone and Telegraph Co. as of December 31, 1922, at nearly \$800,000,000.

Financial Data

The par value of its own stock in turn amounts to more than 40 per cent of the total Bell securities outstanding in the hands of the public. There were approximately 250,000 stockholders of record at December 31, 1922, of whom about 47,000 were employees of the Bell System. At that date more than 94,000 employees of the Bell System were paying for stock at the rate of a few dollars per month under an employees stock purchase plan. Of all American corporations, the American Telephone and Telegraph Co. is stated to have the greatest number of stockholders and the widest distribution of stock ownership. By an increase in authorized capital stock from \$750,000,000 to \$1,000,000,-

000 in March, 1923, it also stepped into the front rank as America's greatest corporation in point of capitalization.

For more than forty years, through wars and financial panics, the Bell System as a whole, after providing for operating expenses, taxes and interest, has earned the dividends paid and also something for surplus, a margin of safety. During the same period the American Telephone and Telegraph Co. has paid dividends of not less than \$7.50 per share per year. During the fourteen years ending April, 1921, payments were \$8 per share. Beginning with the July, 1921 payment, dividends have been at the rate of \$9 per share.

A Nation-Wide Plant

The balance sheet of the Bell System at the end of the last calendar year showed total assets exceeding \$2,000,000,000. Plant and equipment represented something over \$1,700,000,000 of this total. The figure is beyond comprehension, but it stands for 9,500,000 telephone stations and the plant and equipment necessary for their operation, as well as for the operation of 4,500,000 Bell connecting telephones. The number of Bell owned stations is increasing at the rate of 600,000 a year, and there is, of course, a corresponding increase in other plants. The number of Bell telephones in this country is greater than the telephones of all the rest of the world combined. The average daily number of connections during the past year was over 38,000,000.

The telephone service provided for 110,000,000 people requires the work of more than 240,000 Bell System employees, exclusive of employees of the Western Electric Co., Inc. At the end of last year 30,000,000 miles of wire were in use, an increase of 3,000,000 for

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An Arkansas Boy Who Traveled a Curious Circle*

By THANE WILSON

(By permission of *The American Magazine*)

Curious circles! We often find them in people's lives; but the one in Samuel W. Reyburn's career is as unusual as any I have heard of.

As a little boy he was a "merchant"—selling pop corn, berries, and nuts to passengers on the old time "Red-Wheelers" of the Iron Mountain Railroad, down in Arkansas where he and his family lived.

Thirty years went by. During that time he became a lawyer and a banker; still down in Arkansas. Then he was summoned to New York City, to become a merchant once more, but, this time, a merchant handling millions of dollars' worth of goods.

You probably will recall the "Claflin crash"—as it was headlined nine years ago by the newspapers. At that time John Claflin was perhaps the most widely known figure in the mercantile world. Hundreds of thousands of people were financially interested, either directly or indirectly, in his great group of department stores.

On June 26, 1914, out of a clear sky, burst the announcement that Claflin had failed!

At the end of a few weeks of gloom and confusion came the "drafting" of Reyburn. For several years he had been a marked man in the higher circles of finance; and it was a group of supporting New York bankers—doing their best to keep the Claflin crash from becoming a catastrophe—that sent to Little Rock, Arkansas, an almost peremptory call.

Before Reyburn had been many months on his new job he had more than justified the hopes of his backers. He

had shown courage, capacity for straight thinking, and great ability as an organizer. Early in 1916 two of the Claflin organizations were merged into the Associated Dry Goods Corporation—and a few months later Reyburn was elected president.

"But I've no experience as a merchant," he had protested.

"We realize that," the bankers told him. "But you know *money* and you know *men*. You have demonstrated your ability to administer the former wisely, and to inspire and direct the latter."

Thus Reyburn became guiding head of eight great stores: Lord & Taylor and McCreery & Company, of New York; the William Hengerer Company and J. N. Adam & Company, of Buffalo; Hahne & Company of Newark, New Jersey; Powers Mercantile Company, of Minneapolis; Stewart & Company, of Baltimore, and the Stewart Dry Goods Company, of Louisville, Kentucky.

As head of the Associated Dry Goods Corporation, he liquidated the wholesale business of Lord & Taylor, wiped out the debt, put the retail business on a sound and prosperous basis, "humanized" the sales force, and nearly tripled the firm's annual sales. He wrought the disorganized staff of the seven other stores into enthusiastic and efficient groups. He wrung "water" out of inflated inventories and excessively valued fixtures. He resumed the payment of dividends on preferred and common stock. To-day these eight stores do *eighty million dollars*' worth of business a year.

Reyburn himself would insist that *he* did not do this; that it was made possible

by the loyal support he received within and without the organizations. And, of course, he would be right. No general can win a battle without an army; but, in history, it is always the general to whom victory is credited, or defeat is charged.

It seems almost absurd to dismiss this achievement so briefly. But I am doing it to make room for a story of far greater interest and value to you and me, the story of Reyburn's life in Arkansas; of his picturesque boyhood; of his upward climb and the handicap that almost halted it; of the way in which he overcame that handicap, and of his subsequent steady march onward.

For years before the Civil War the Reyburn family had been one of the most prominent in Arkansas. Samuel's grandfather was not only the owner of two sizable estates but he held the government contracts for all mail deliveries within the state—a contract handled in connection with his stagecoach business, which was known all over the South.

Upon the death of its founder, in 1854, this business was inherited by his two sons, one of whom was Joseph Reyburn, Samuel's father. For the next six years the brothers continued it with increasing profit. Then came the war—at the close of which "Joe" Reyburn returned home to a scene of utter devastation. His three children were dead—victims of the lack of proper medical attention. All his stagecoach horses and live stock were gone. The government mail contracts—which had furnished a comfortable income—were non-existent. His lands were ravaged; his houses dilapidated; his few slaves freed. A once prosperous "Southern gentleman," he now faced the necessity of working with his hands for a living—a task for which he was totally unsuited by tradition and training.

In 1867, he leased a small plantation in the "Arkansas Bottoms," which he cropped for several seasons. At the start of each blazing summer he sent his wife to "Fairplay," the old family estate on Reyburn's Creek, in Hot Springs County. It was here that Samuel Reyburn was born, in 1872.

There were six in the family—the father, mother, and four children—when, in 1876, Reyburn moved to Malvern, about twenty miles from Hot Springs. Eventually he settled on a small farm, about half a mile beyond the village limits, and undertook to raise cotton and various small crops. But during the next few years his annual income rarely exceeded five hundred dollars—scarcely enough to clothe and feed his family.

When Sam was eight years old his mother hit upon the idea of supplementing the family finances by the sale of butter, eggs, fruits, and vegetables to the residents of Malvern. Sam acted as her "right-hand man," scouring the village for orders each day after school and making his deliveries early the following morning. Within a few weeks he had built up the nucleus of a promising trade.

Encouraged by his success, he worked out a plan to enlarge it. There was a thirty-minutes wait at Malvern for passengers who were changing to the Hot Springs train; and during this half-hour most of them strolled idly about the platform. The boy decided that daily he would cram a basket with pop corn, berries, fruits, and nuts, and try to sell his wares to the station crowds. Arrangements were made whereby he could be excused from school whenever necessary.

His sales soon increased to such an extent that the family garden plot could not supply the demand. So he persuaded the wives of several neighboring

farmers to let him sell for them on a commission basis. He hired two or three of his schoolmates to assist him, and in this way added seven or eight dollars a week to the family purse during the summer season.

Eager, polite, and eternally alert, Sam learned to hold his own in the good-natured game of give-and-take with the members of the sporting fraternity, to whom the Hot Springs resort had become more or less of an annual Mecca. And he was developing a sturdy independence that was to stand him in good stead later.

One afternoon, John L. Sullivan, world's champion heavy-weight pugilist, passed through Malvern on his way to Hot Springs to train for his famous bout with Paddy Ryan. As the "Red-Wheeler" slowed to a grinding stop, "the great and only John L." swung to the platform, followed by his retinue of satellites. Young Reyburn, with a crate of a dozen boxes of strawberries clutched in his arms, pushed through the crowd.

"Good-looking berries, sonny. Are they fresh?" asked John L.

"Yes, sir; picked to-day."

"How much are they?"

"Twenty-five cents a box."

"Give me a box."

When the beaming giant had passed his purchase among his camp followers, one of them called out, "Hey, John L. The kid's stung you. There are only two layers."

"What's that? *Here, boy!*" The champion's bellow carried to the very outskirts of the throng.

Young Reyburn had swung around at the first call. He clutched his crate more firmly and stared the towering boxer straight in the eyes.

"You asked me if the berries were fresh," he said. "They *are!* If you'd

asked me how many there were in the box, I'd have told you that there were the same number we've always sold at this station—without anyone ever kicking before. If you don't want them, sir, I'll take them back."

The frown on Sullivan's face changed to an expansive grin.

"Good for you, boy," he shouted. "You're a lad after me own heart. I'll take all the rest of the boxes."

The most powerful single influence in Reyburn's life during this period was the practical training and far-seeing philosophy of his mother. Especially she taught him contempt for sham and deceit.

"It isn't enough to *be* honest, Sam; you must *think* honest," she would say, holding him in her arms before the great open fireplace.

Then she would take a thumb-worn copy of Shakespeare's plays and read to him by the hour, marking many passages of wise philosophy. Most of these he learned by heart.

His father's contribution to his training at this point was no less important.

"The one unforgettable thing my father taught me was courage," Reyburn once told me. "It's no disgrace to get licked, my son," he used to say; "but it is a disgrace to run away from a licking, or to lie or shift responsibility in order to avoid it. This is important in your boyhood—but it will be doubly important when you get out into the world of business."

Fate was reserving another disaster for the already stricken family. When Sam was twelve years old his mother became seriously ill. Her husband immediately sold his farm and moved to Little Rock, where the best medical attention could be obtained; but a few months later the blow fell.

After his wife's death, Reyburn took

the family to Magnet Cove, a little settlement about fifteen miles north of Malvern, where he had inherited some land. The next year Sam helped his father get the farm under cultivation and also picked cotton for neighboring planters.

One afternoon in the following summer the fourteen-year-old boy drove to Becker's, a neighboring community which had the biggest sawmill in the county. He was hoping to sell a load of fruit and vegetables at the boarding-house run in connection with the mill. While he was there the mill superintendent saw him, liked him, and offered him a job at one dollar and twenty-five cents a day. This was man's wages, and the boy jumped at the chance.

When he reported for work the superintendent learned that, despite his size, he was only fourteen years old.

"I can't give a boy of your age more than seventy-five cents a day," he announced.

Young Reyburn was heartbroken. The boarding-house rate was sixteen dollars a month, nearly his entire wage. Little would be left for clothing or savings. But he was not to be downed. He hunted up a distant relative, living near by, and arranged to receive his board in return for getting up in the morning ahead of the family, kindling the fire, and helping to get breakfast. Then he struck a bargain with the son of the mill owner, whereby he was to be paid one dollar a week for grooming and feeding the latter's riding horse.

The boy handled his new job with such energy and thoroughness that he soon received the dollar and twenty-five cents a day he had been promised originally. He had been promoted to the planer, and was laying ambitious plans for acquiring a sawmill of his own some day, when his foot was crushed by a fractious log. It

was several weeks before he was able to walk.

In October, 1888, Reyburn went to Little Rock to look for a job. Eventually he found one in the offices of the Iron Mountain railroad, where he was sent out to collect freight charges from manufacturers and other concerns into whose yards the railroad had built spur tracks.

Reyburn had been hired by the chief clerk when a vacancy had occurred in the absence of the local agent. In a few weeks the latter returned from his leave of absence and was thunderstruck to learn that a sixteen-year-old boy had been given such responsible work.

"We'll have to take the job away from him," he said.

"You'd better not be hasty," put in his assistant. "If you look into things a bit you'll find that he is handling his duties twice as effectively as any man we ever had."

The agent decided to suspend judgment and watch the youngster closely. Soon an incident occurred that not only settled this matter but had a significant effect on Reyburn's life for the next few years.

One afternoon the boy walked into a prominent Little Rock dry-goods store and laid forty dollars on the counter in front of the proprietor.

"You have on your books an account against Joseph Reyburn for nearly two hundred dollars, haven't you?" he asked.

"I used to have a charge of about one hundred and eighty dollars," replied the astonished merchant, "but I marked it off long ago. Reyburn is a good fellow who has had a lot of hard luck. I've charged it to profit and loss. . . . Who are you?"

"I'm his son, and I've come to pay forty dollars on account. It's all I've got—but I'll settle the rest as soon as I can earn it."

"You're under no obligation to do this."

"Perhaps not—but *I'm going to!*"

They struck up a conversation, in the course of which the merchant noticed that Reyburn's clothes were threadbare.

"I'll accept your money if you'll pick out a new suit and let me charge you with it," he said. "Then you can pay for the suit and the rest of the bill at your leisure."

So impressed was the merchant by the incident that he told it in detail to the president of one of the local banks, who was also a director of the railroad. Not only did the banker see that the story was passed along to the freight office but he sent for the boy a few weeks later and offered him a position in the bank—an offer which Reyburn declined out of loyalty to the railroad.

Within the next two years Reyburn received several promotions. Meanwhile he had taken a small house, which he shared with two of his sisters, one of whom was teaching school in the city. Presently his closest friend in the freight office came to live with him. This was Fairfax Loughborough, to-day one of the leading attorneys of Arkansas.

Both young men spent most of their evenings in serious reading and study, and before long Loughborough had communicated his enthusiasm for a legal career to Reyburn.

"But how are we going to manage it?" they asked each other.

Eventually they decided to go to the dean of the law school of the State University and try to persuade him to change the classes and lecturers from day to evening sessions. Then they could study law and hold their jobs at the same time.

If it occurred to either youth that a university might not be willing to shatter its routine of years in order to help make a lawyer out of him, he did

not allow the thought to dampen his enthusiasm.

The dean listened to their fervid plea and then shook his head. "You're asking too much, boys," he said.

"But there must be other fellows like us—who'd like to go to law school in the evenings," they pleaded.

The dean smiled. "I'll tell you what I'll do," he said finally. "If you'll get the consent of all the lawyers who lecture here, and all the students now in the law school, and if you'll find someone else to join you boys in the course, I'll agree to the change."

If he thought he had imposed impossible conditions, the dean was due for a shock. Somehow the two earnest youths managed to persuade all parties concerned to consent.

In accomplishing this, Reyburn not only gained his immediate end, but he attracted the attention and approving comment of all the lawyers of the city, just as he already had gained favorable notice in banking circles by the widely circulated story of his redemption of his father's debt. It was two years later before he realized how important an effect these two incidents had on his career.

The two chums pegged away at their jobs and studied law at night. Their only recreation came on Sundays and holidays. Early in the morning they would take an old sailboat which they kept tied up on the banks of the Arkansas River, and sail far up the stream. Then they would take in the sails, stick up big umbrellas to keep the sun's glare out of their eyes, and as they drifted gently down-stream with the current, they would study the law books they had brought with them.

At noon they would put into some cove for lunch. After this was over, one of them would mount a stump or a mossy

mound and declaim the substance of some famous legal plea, while the other, standing a couple of hundred yards away to represent the "outskirts of the crowd," would testify to the clearness and carrying power of the speaker's voice.

When he was twenty-two years old, Reyburn was admitted to the bar. He would have begun practice at once had not the necessity arisen for his assuming an unexpected financial burden of eight hundred dollars in debts. He decided to pay this off and get enough money ahead to equip an office before making his bow in the legal world. In the meantime, he felt that he ought to take up some work that would bring him into closer contact with the general range of commerce and business.

Such an opportunity presented itself through Sidney J. Johnson, who had begun to build up a rather promising real-estate, brokerage, and private banking business in Little Rock. It happened that Johnson's wife was spending a three-weeks vacation in the country with an aunt of Reyburn's. Every week-end the real-estate man drove out there. He invited Reyburn to take the trips with him; and this resulted in several long talks, which gave Johnson a chance to size up his young companion.

"Why don't you come to work for me?" Johnson asked. "Right now, I can't afford to pay you more than fifty dollars a month. But the experience will be just what you need."

Although Reyburn had been getting one hundred dollars a month from the railroad he accepted the offer without hesitation, and went with Johnson on October 1, 1894, the same year he had received his degree from the university.

Fifty dollars a month was far from a munificent salary for a young man who was trying to wipe out an old debt and to

save money to equip a law office. So, he employed the same kind of tactics he had tried out at the sawmill a few years before. Learning that the owner of a nearby two-story office building was troubled because the unrented second floor had become a rendezvous at night for vagabonds and roustabouts, Reyburn proposed that, in return for a room there, rent free, he would protect the property from nocturnal molestation. The owner jumped at the offer.

Into this room Reyburn moved a bed, an oil stove, a few dishes, and a chair. Here he lived, doing his own cooking, making his own bed, and even washing out most of his own clothing. In an entire year of this routine his living expenses amounted to only one hundred and forty-four dollars.

Meanwhile, he had become Johnson's right-hand man. At first he had been put to collecting rentals and handling other routine details; but when he showed a real bent for the brokerage and banking side of the business, Johnson laid more and more of it upon his shoulders and increased his salary correspondingly. Two years after he started work, Reyburn announced he had wiped out his debt and saved fifteen hundred dollars, which he considered enough to finance the opening of a law office and to support himself while waiting for clients.

Reyburn took away from Johnson's office more than a knowledge of business practices. He took away the memory of an unforgettable experience—an adventure in self-revelation which had a profound effect on his entire career. The story of this experience I learned from Reyburn himself.

"You've heard how my mother used to warn me that I was more likely to fool myself than to have other people fool me," he explained. "She was dead right.

I became the victim of one of the most common and costly of all delusions.

"As a boy, I had held my own pretty well. In the sawmill the older men used to flatter me; and when I got into the railroad freight office I soon discovered that I could swing any of the jobs there without difficulty. This gave me a pleasant complacency; made me think I was a little brighter than the ordinary run of folks. Getting my law schooling the way I did added to this feeling. Indeed, I was beginning to think mighty well of myself.

"Although I worked hard and faithfully, I fell into the habit of adopting a cocksure and indifferent attitude toward outsiders and toward those holding less responsible positions than my own. One day at the station, for instance, an old-time resident of the city called to get a package we had received for him.

"If you want me to turn this over, you'll have to be identified," I remarked.

"Oh, everybody here knows me," he replied.

"That's what *you* think," I returned—and felt that my answer was real smart.

"Even at the bank, where I worked harder than ever before, I made no special attempt to be agreeable to the world at large. One day an important customer stalked angrily up to Johnson's desk and announced that he was going to withdraw his account.

"What's the matter?" asked Johnson.

"Oh, it's that young Reyburn. He always gives me the feeling that he thinks he is better than I am."

"Johnson called me in, and by diplomacy and jollity he led the two of us, at the end of a half-hour, to shake hands and promise to be more friendly in the future. When the customer had left, Johnson turned to me solemnly—and his words will be engraved on my mind as long as I live.

"You're a bright boy and a hard worker, Sam," he said; "but there's one thing you have overlooked. That's *personality*. You're so absorbed in your work and in *yourself* that you pay no special attention to making yourself agreeable to other people. They seldom see the real *you*. I wouldn't have seen it myself if it hadn't been for those long drives we had together. In business, Sam, it pays to think of the other fellow. And, in business or elsewhere, this characteristic gives you an inner glow that comes from nothing else in the world."

"It took two or three days for Johnson's remarks to sink thoroughly in, but finally the realization of their truth struck me with overwhelming force. I saw that old Plato and the other philosophers had been right when they said that we were composed of a trinity: body, mind, and spirit. I had a strong body and a good mind; but the 'spirit' side of the partnership—which was expressed in personality—was something I had neglected to cultivate. I vowed solemnly that I would dedicate every ounce of my energy to remedying this deficiency."

"What did you do to remedy it?" I asked.

"Everything I could think of," smiled Reyburn. "First, I decided to sit down every night and analyze what I had done during the day—in other words, to make an honest audit of my actions.

"I asked one of my sisters, who had a great many friends, to repeat any criticism of me that she heard anywhere. I tried, sincerely and honestly, to profit by whatever she told me. If two or three people said the same thing about me, I knew that there was likelihood of its being true. Smoke usually means fire.

"Then I studied important men in the

community who were personally popular, and I tried to unearth just what qualities and characteristics *made* them popular. After determining these characteristics, I schooled myself to imitate them."

"Isn't there danger of losing one's individuality by imitation?" I asked.

"To the contrary, I believe that the person who has learned to imitate wisely has mastered one of life's most priceless lessons. Young people should realize that there are plenty of older and wiser persons in the world. Anyone with open ears and eyes, and with a humble heart, can learn much from others. The tradition that one can profit only from one's own experience doesn't *have* to be true.

"Of course imitation will carry you only so far. Beyond that you have to depend on your own initiative and intelligence. Yet imitation will take you over a part of the journey where many people flounder around and waste years—just as I was about to do before this particular experience."

"How did your new scheme of life work out?"

"Spendidly. Not only was I happier than I ever had been before but I found that I was getting richer in friends every day. All this was directly reflected in the business. I recall, for instance, that the important customer who had threatened to sever relations with us, later withdrew ten thousand dollars from another institution and turned it over to us. It was the largest single account, up to that time, in our banking department."

Eight months after he had opened his law office Reyburn received an urgent message from Johnson. Hurrying to the latter's office he was informed that certain transactions of a trusted em-

ployee had produced embarrassing complications.

"You must come back for a while, Sam, and help me to get things straightened out," pleaded Johnson.

Reyburn finally agreed to return, on condition that he might devote half his time to his law practice. This arrangement was still in force when, in the winter of 1899, Johnson died.

Reyburn was the only man available to assume direction of the growing business. He gave up his law practice and became manager of the firm, in which he was to have a one-fourth interest, to be paid for out of his share of the profits.

Concentrating from the start on the banking end of the business, Reyburn jumped the deposits in a little over a year from \$30,000 to \$225,000. In February, 1902, the firm became the Union Trust Company, and within another year the deposits had almost touched the half-million mark. Reyburn was elected president of the institution.

This was not due to any departure from previous programs. It was the direct flowering of all that had gone before—of those varied events which I have attempted to describe. Little Rock was a comparatively small city; and the influential business men remembered the story of a boy who assumed and paid a canceled debt—who changed the channel of a university in order that he might have a law education—who lived in a bare little room and cooked his own meals, so that he might save money to open his own office. And these memories were refreshed by daily contact with the kindly consideration and personal charm which had been born out of one of Reyburn's bitterest experiences. Probably no man in Little Rock had more personal

(Concluded on page 19)

The L. R. B. & M. Journal

Published by Lybrand, Ross Bros. and Montgomery, for free distribution to members and employees of the firm.

The purpose of this journal is to communicate to every member of the staff and office plans and accomplishments of the firm; to provide a medium for the exchange of suggestions and ideas for improvement; to encourage and maintain a proper spirit of cooperation and interest and to help in the solution of common problems.

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Life

What can be more fascinating than the study of life, that mysterious force which manifests itself in so many different ways—physical, mental and spiritual—and yet which in so many respects defies analysis and definition. History and biography are records of life and of

development resulting from its presence and activities; records of the achievements of peoples or of individuals when life has been utilized for development and progress along lines and in directions which have been helpful, fruitful and successful, and of failures, too, when the possibilities of life have been neglected or used for wrong ends.

Because the study of the lives of individuals and of peoples is so profitable intellectually and so stimulating, especial attention is directed to the two leading articles which are presented in this issue of our L. R. B. & M. JOURNAL. One article tells the absorbing story of the wonderful development of the use of the telephone and of the organization which has made this possible; the other article tells one more of those stories of which Americans are justly proud—the conquest of adversity and the rise to deserved recognition by an American boy who began life at the bottom of the ladder.

One of the wonders and mysteries of modern life is the development of the idea of organization. To be sure, organization is in itself no new thought or idea. Civilization would be impossible without organization, governmental, industrial and social. Still the high degree to which the idea of organization has been developed and applied to industry and commerce belongs especially to recent times. The multitude of everyday conveniences and luxuries which we enjoy would not be possible without it.

The telephone assuredly belongs to the most wonderful inventions of all time, but without the organization which has been perfected by those who developed its practical possibilities, the telephone might still be, if not merely a curiosity-provoking instrument, at least only of local utility. When we remember that the lines of the Bell Telephone System

extend through city and village, over mountain and into the valley, across the plain and along the river bank, from ocean to ocean; when we think of the millions of poles, millions of miles of wire, miles upon miles of underground ducts, and millions of instruments, not to mention buildings and exchanges without number all over our broad land, we begin to get some idea of the scope of this far-flung system. And when we remember further that without an organized personnel, trained and synchronized in its working, to utilize as well as to plan and construct all this equipment, to keep it going and meeting our needs day and night, in all seasons and in all kinds of weather conditions, we get some realization of what a wonderful human organization the Bell Telephone System is. To the writer, as he has thought about it, it has seemed one of the most wonderful—yes, marvelous—organizations in the business world.

Because of this fact, we esteem it an honor to have an association with the Bell Telephone System in that we are the auditors of the American Telephone & Telegraph Company, the parent company of the system. For some years past the published annual reports of that company, which go to more persons than any other corporation report in this country, have had our certificate appended to the balance sheet forming part of the report.

After all is said and done, however, no organization can function long—in fact it does not even come into being—with out one or more strong, inspiring and guiding men behind it, or, rather, in it. An army without leaders is but a mob. Emerson said, "Every institution is but the lengthened shadow of one man."

But how do men rise to positions of leadership? What is there that differentiates them from other men in the liv-

ing of their lives, in their utilization of its forces and of such opportunities—meager or plentiful as the case may be—as it offers? The second article in this number, which gives an account of the life of Mr. Samuel W. Reyburn, affords good "case material" for anyone who wishes to find the answer to the foregoing questions.

The article will be found to be more than merely an interesting account of the experiences of a man who from boyhood on had not merely to make the most of his opportunities but who had to seek, and even create, opportunities for the development and application of the qualities and abilities which were innate in him. The major value of the article will be found in its portrayal of the principles on which a successful business life is built, of the abiding influences of early training and of how each experience may be a stepping stone to greater and more important opportunity and responsibility.

The acquaintance between Mr. Reyburn and our firm began almost immediately upon his removal to New York, now almost ten years ago. During the time which has since elapsed the contact between Mr. Reyburn and our firm, and more particularly the several partners at our New York office whose duties have brought them most frequently into touch with Mr. Reyburn, has engendered a high esteem and regard for him as a man and for his abilities and achievements in the leadership of the important mercantile concerns which he directs.

We cannot help feeling that a perusal of the article describing Mr. Reyburn's life experiences will be profitable to every member of our organization, and particularly to the younger members of our staff. They will find in it both inspiration and helpful suggestion.

"Reading Maketh a Full Man"

From APPRAISAL NEWS

To those who cannot find the time to take advantage of the wonderful educational facilities of our city, the following suggestions may not be amiss. It is admitted that the ability to express oneself in clear, concise, and cogent English is one of the best results of school training. How, then, can one obtain such training without school attendance? Bacon says, "Reading maketh a full man; conference a ready man; and writing an exact man." No one can express thoughts if he have none, therefore the obvious thing to do is to get some. This can best be done by reading. The master mind is such because he reads and thinks about what he reads.

If you desire to express yourself as Lincoln did, in clear, simple, but cogent Anglo-Saxon, it is only necessary to read aloud 15 minutes a day—aloud, so that your ear can plainly hear what your mouth distinctly utters—passages from the Bible or from some other pure Anglo-Saxon source, such as Bunyan's Pilgrim's Progress, where the monosyllabic word is so much in evidence and where the thought undefiled is so plainly expressed. On the walls of Brasenose College at Oxford, in England, hangs a framed copy of Lincoln's letter to Mrs. Bixby of Massachusetts, in which he expresses the sorrow of the Nation because of her loss of five sons in the cause of the North during the war of the Rebellion. Underneath the picture is this inscription, "A specimen of the purest English ever written." What a wonderful tribute to our martyred President! Lincoln read these books; that is how he acquired that style of diction.

An Arkansas Boy Travels a Curious Circle

(Continued from page 16)

friends; certainly no man was ever more trusted by the friends he had.

"Good will is just another name for *good character*," Reyburn once told me.

Soon after his election as president of the Union Trust Company, Reyburn took his place as one of the financial leaders of the city. Within two years he was made president of the Little Rock Clearing House Association. In 1908 he was selected to head the Arkansas Bankers' Association. At about the same time he became a member of an important committee of the American Bankers' Association, where he served for seven years. During this period he received and declined a number of overtures from important banking houses in New York City. The call in 1914, however, was so urgent that he was forced to heed it.

Incidentally, Reyburn has evolved a carefully analyzed philosophy of leadership.

"The real leader," he once said to me, "must have two distinct qualities: a mind that can analyze cold, hard facts without passion, or sentiment, or self-delusions—and a spirit that will kindle other men to fight for the program these facts dictate.

"No man can become a leader, moreover, unless he has the capacity for decision. If, out of a hundred chances to exercise his judgment, a man decides rightly seventy-five per cent of the time, he is running at a profit. Then, if he does not fritter away his time and energy in trying to cover up the occasions on which he was wrong, he probably will be able to decide rightly eighty-five per cent of the time. That will make him a tremendous success. The sooner he realizes this, the sooner he will be on his way."

The Bell Telephone System

(Continued from page 8)

the year. More than 64 per cent of the Bell owned wire mileage was in underground cables.

The Purchase and Supply Organization

The plant of the Western Electric Co., Inc. at Hawthorne, near Chicago, comprises 207 acres of ground, and its buildings provide more than 70 acres of floor space. It has 51 storehouses in all parts of the United States. In order to keep pace with the demand for telephones and telephone equipment, it has lately made important additions to its principal plant at Hawthorne and now proposes to build an auxiliary manufacturing plant at Kearny, New Jersey. The sales of the Western Electric Co., Inc., are around \$200,000,000 annually. Much more than half of its business consists in supplying the needs of the Bell System.

The telephone buildings of America assembled would make a city as large as Richmond, Va. The beauty and dignity of the American Telephone and Telegraph Co. building at 195 Broadway would make it a worthy capitol of such an array. This building was one of the achievements of Mr. Vail's later years. Like him it is massive and efficient.

The Work of the System in Retrospect

The Bell Telephone System stands stupendous in its magnitude and absolutely unique in its service. Marvelous as are its past achievements, its future possibilities are beyond the bounds of imagination. The growth of success of this gigantic enterprise seem ever more remarkable when considered in the light of a comment once made by N. T. Guernsey, Vice-President of the American Telephone and Telegraph Co.: "An important fact that few people appreci-

ate, either within or without the Bell System, is that what was required from Doctor Bell was nothing more than the right to use his idea. There was no commercially practical apparatus; there was no science or art of telephony. The undertaking of the Bell System when Mr. Vail became the manager, was to develop this art and science and to build upon it a great public service. The undertaking was not, as people are apt to believe, merely to take a commercially practical piece of apparatus and put that on the market. Everything had to be created."

Thirteen Mistakes of Life

1. To attempt to set up your own standards of right and wrong.
2. To try to measure the enjoyment of others by your own.
3. To expect uniformity of opinions in this world.
4. To fail to make allowance for inexperience.
5. To endeavor to mold all dispositions alike.
6. Not to yield to unimportant trifles.
7. To look for perfection in our own actions.
8. To worry ourselves and others about what cannot be remedied.
9. Not to help everybody, wherever, however and whenever we can.
10. To consider anything impossible that we ourselves cannot perform.
11. To believe only what our finite minds can grasp.
12. Not to make allowance for the weaknesses of others.
13. To estimate by some outside quality, when it is that within which makes the man.

—Judge McCormick.

